## RECLAMATION

Managing Water in the West

## RIO GRANDE PROJECT

El Paso Field Division 10737 Gateway Blvd. West, Suite 350 El Paso, TX 79935



U. S Dept. of the Interior Bureau of Reclamation

## RECLAMATION

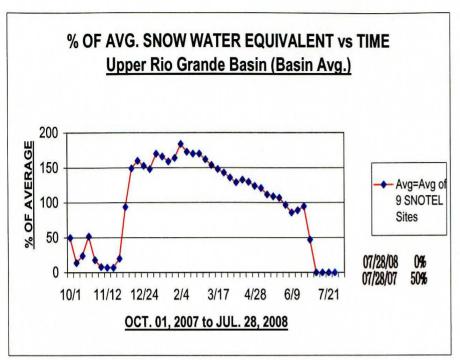
Managing Water in the West

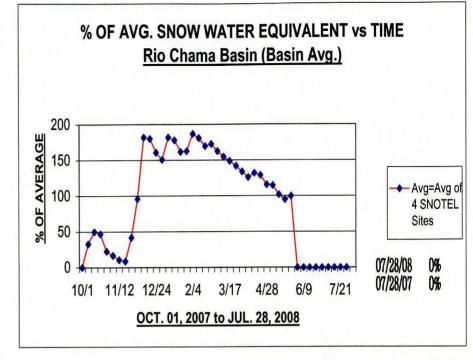
## RIO GRANDE PROJECT

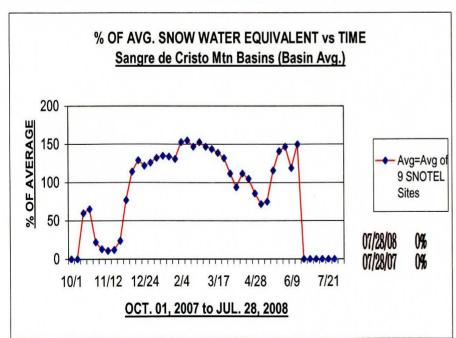
## CURRENT HYDROLOGIC CONDITIONS OF UPPER RIO GRANDE BASIN

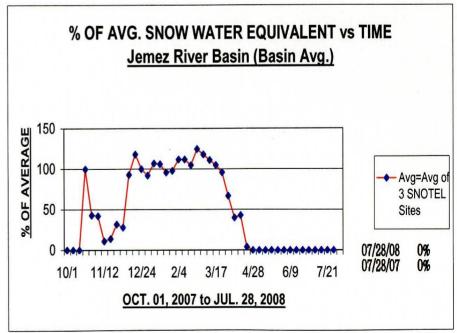


U. S Dept. of the Interior Bureau of Reclamation



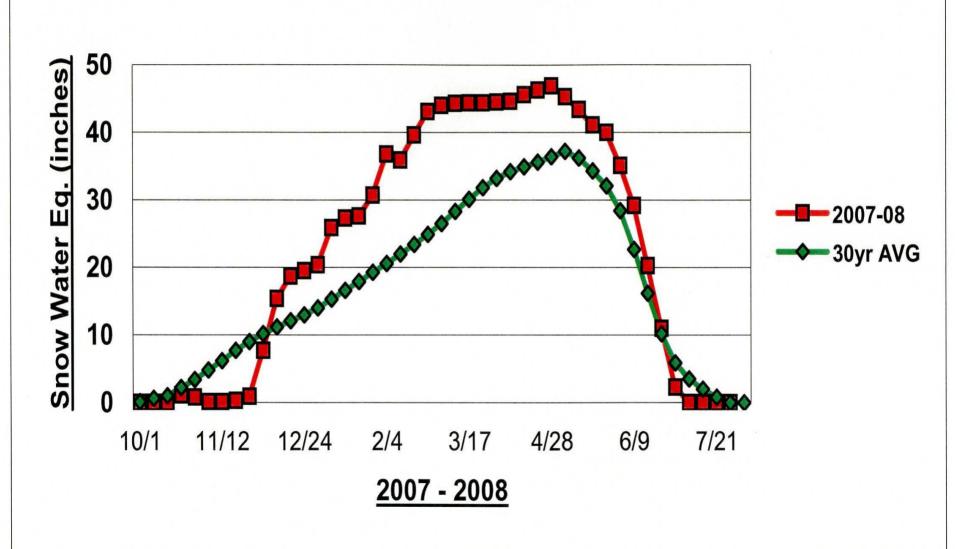


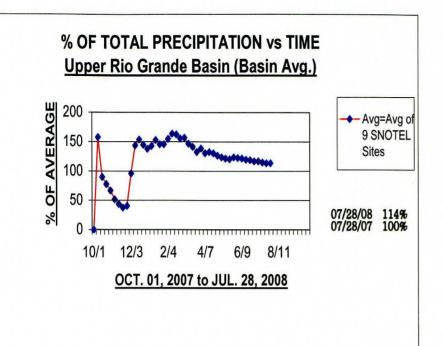


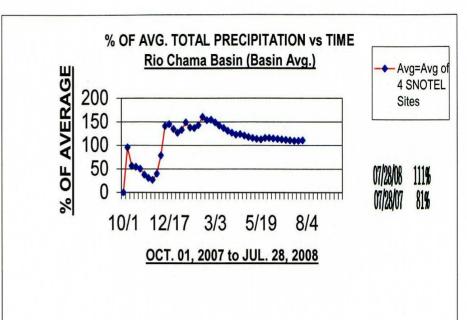


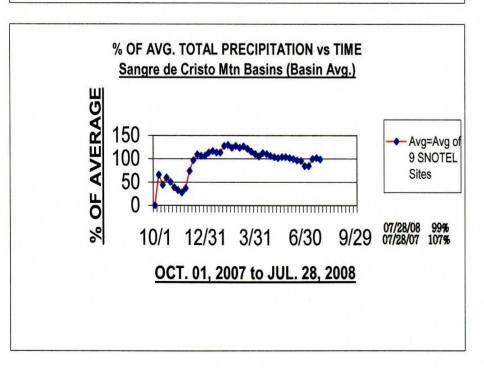
### **WOLF CREEK SUMMIT SNOTEL**

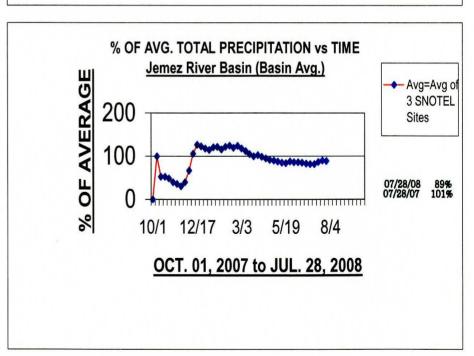
Elevation: 11,000 FT











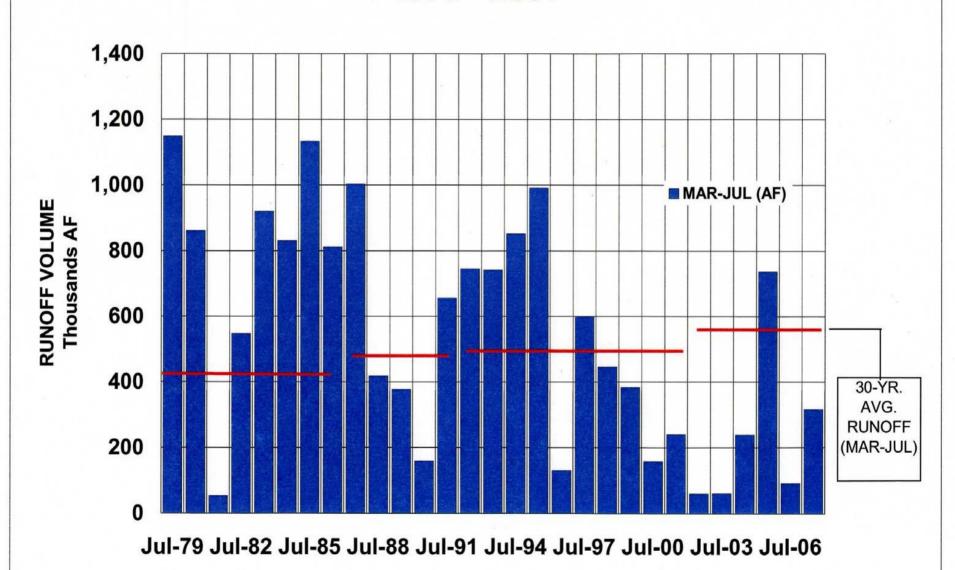
SPRING	RUNOFF	FORECASTS
	2008	

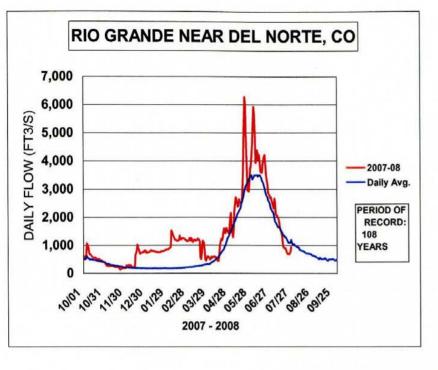
#### RIO GRANDE BASIN

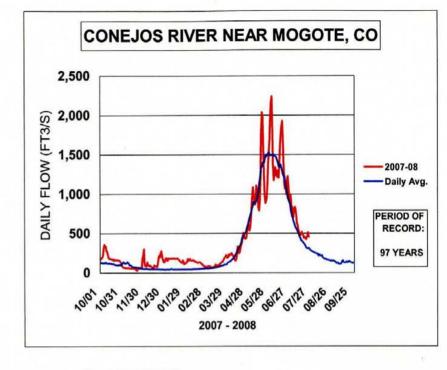
(ACRE-FEET)

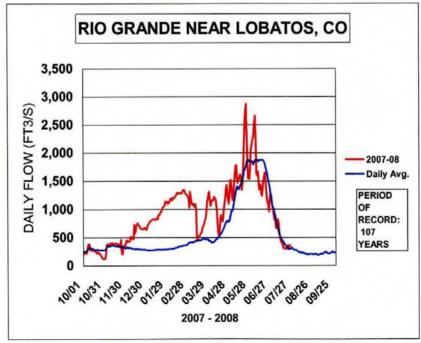
FORECAST POINT	Rio Grande nr Del Norte	Rio Chama at El Vado Reservoir	Rio Grande at Otowi Bridge	Jemez River at Jemez Canyon Reservoir	Rio Grande at San Marcial
FORECAST PERIOD	APR-SEP	MAR-JUL	MAR-JUL	MAR-JUL	MAR-JUL
30-YEAR AVERAGE RUNOFF *	531,000	237,000	757,000	45,000	573,000
JANUARY 1	690,000	295,000	940,000	36,000	750,000
FORECAST	130%	124%	124%	80%	131%
FEBRUARY 1	790,000	390,000	1,300,000	50,000	1,050,000
FORECAST	149%	165%	172%	111%	183%
MARCH 1	850,000	400,000	1,380,000	<b>52,000</b> 116%	1,150,000
FORECAST	160%	169%	182%		201%
APRIL 1	745,000	375,000	1,170,000	41,000	980,000
FORECAST	140%	158%	155%	91%	171%
MAY 1	680,000	330,000	1,040,000	36,000	695,000
FORECAST **	128%	139%	137%	80%	121%
JUNE 1	655,000	305,000	965,000	33,000	665,000
FORECAST	123%	129%	127%	73%	116%
	70% Excee (drier)	edance:	920,000 122%		615,000 107%
	90% Excee (minimum		860,000 114%		550,000 96%
JUNE 1 2007	, <b>450,000</b>	178,000	530,000	38,000	410,000
	85%	75%	70%	84%	72%

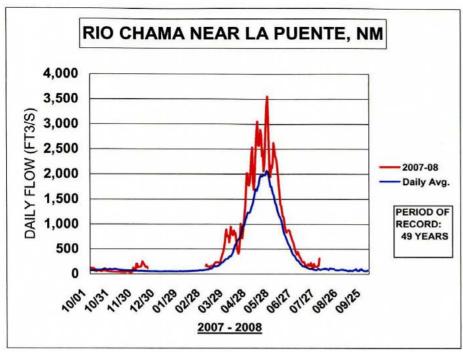
### HISTORICAL RUNOFF - SAN MARCIAL 1979 - 2007

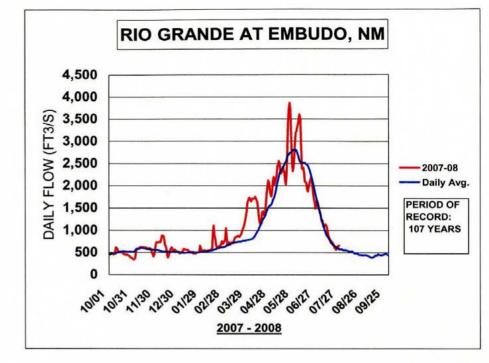


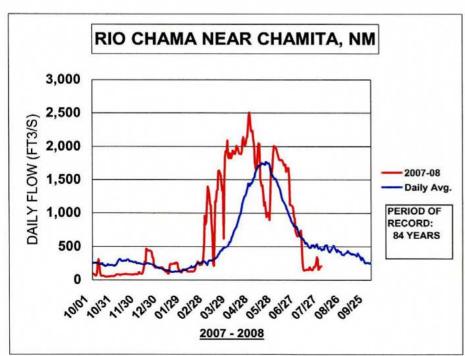


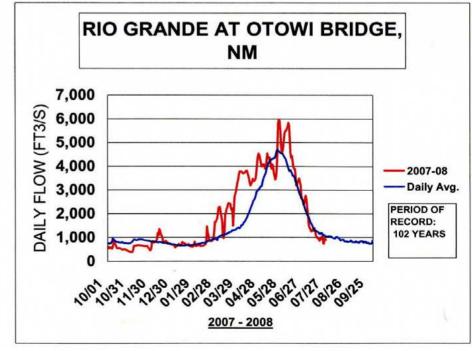


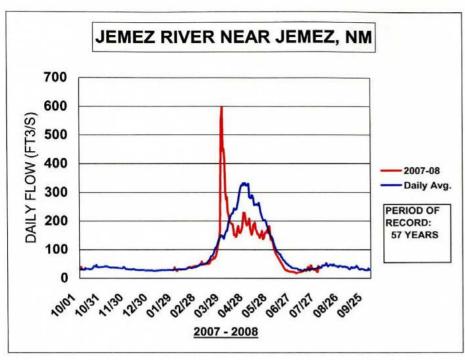


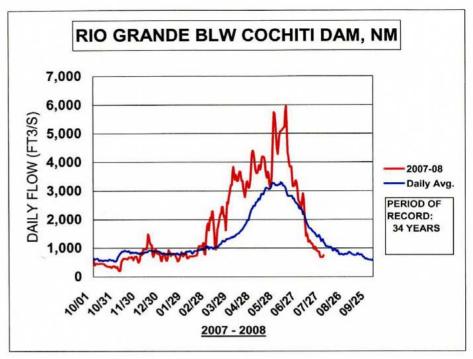


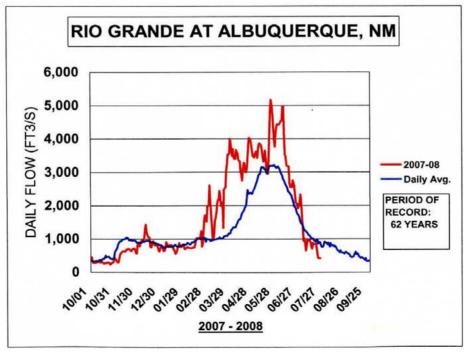


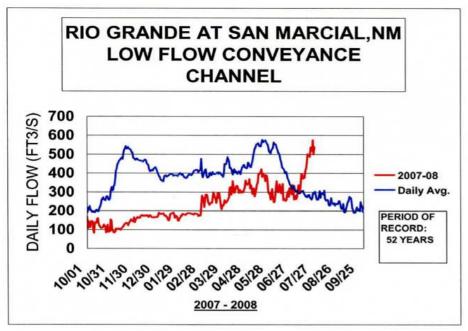


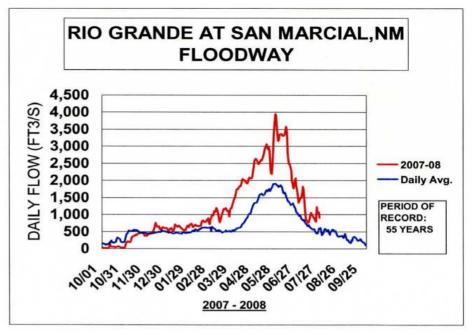


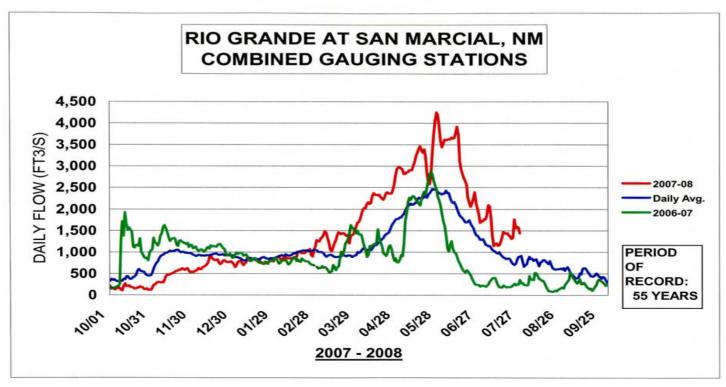


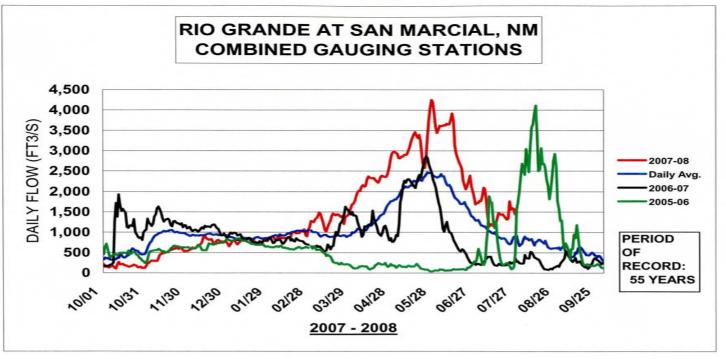


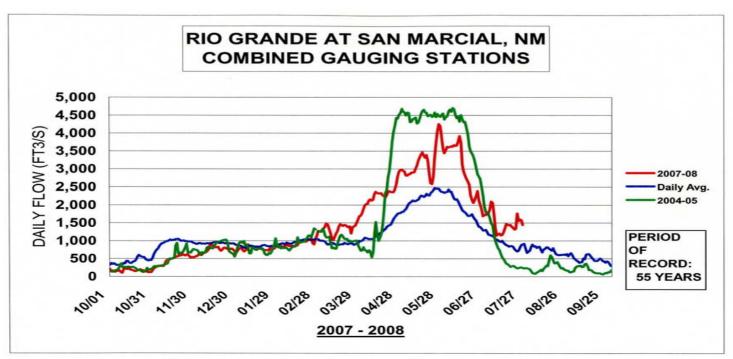












# RECLANIATION Managing Water in the West

### RIO GRANDE PROJECT

#### INFLOW TO ELEPHANT BUTTE RESERVOIR AT SAN MARCIAL STATIONS

	2007	2008						
	Oct - Dec	Jan	Feb	Mar	Apr	May	Jun	Total
	82,347	48,363	53,710	83,250	135,784	197,724	172,659	773,837
Avg.	149,000	47,000	48,000	60,000	120,000	195,000	130,000	749,000

Mar.-Jul. 2007 = 55.3% of average (316,976 AF)

Mar. 2008 - Jun. 2008 = 116.7% of average

Oct. 2007 - Feb. 2008 = 75.6% of average

Projected Mar. 2008 – Jul. 2008 = 119.1% of average

#### EL NIÑO/SOUTHERN OSCILLATION (ENSO) DIAGNOSTIC DISCUSSION

issued by

### CLIMATE PREDICTION CENTER/NCEP/NWS 10 July 2008

Synopsis: ENSO-neutral conditions are expected to continue into Northern Hemisphere Fall 2008.

A transition from La Niña to ENSO-neutral conditions occurred during June 2008, as sea surface temperatures (SSTs) returned to near-average across the central and east-central equatorial Pacific Ocean (Fig. 1). Also, positive SST anomalies continued in the eastern equatorial Pacific. Consistent with this pattern, the latest weekly SST index was -0.1°C in the Niño-3.4 region, and +0.4°C in the Niño 1+2 region (Fig. 2). The subsurface oceanic heat content (average temperatures in the upper 300m of the ocean, Fig. 3) and patterns of subsurface temperature anomalies (Fig. 4) also reflected the transition to ENSO-neutral conditions. Positive heat content anomalies were associated with above-average temperatures at thermocline depth across the entire equatorial Pacific, while small negative subsurface temperature anomalies persisted near the Date Line between the surface and 75m depth.

Similar to past transitions, La Niña continues to linger in the atmospheric circulation, but with diminishing strength. Enhanced low-level easterly winds and upper-level westerly winds remain across the central equatorial Pacific, while convection continues to be suppressed in the central equatorial Pacific and slightly enhanced over the far western Pacific. Collectively, these atmospheric and oceanic anomalies are consistent with a return from La Niña to ENSO-neutral.

Most of the recent dynamical and statistical SST forecasts for the Niño 3.4 region indicate ENSO-neutral conditions (-0.5 to 0.5 in the Niño-3.4 region) will continue through Northern Hemisphere Winter 2008-09 (Fig. 5). Despite this model consensus, the possible development of El Niño or La Niña cannot be ruled out due to uncertainty in model forecasts and because ENSO events often form during the second half of the year. Based on current atmospheric and oceanic conditions, recent trends, and model forecasts, ENSO-neutral conditions are expected to continue into Northern Hemisphere Fall 2008.

This discussion is a consolidated effort of the National Atmospheric and Oceanic Administration (NOAA), NOAA's National Weather Service, and their funded institutions. Oceanic and atmospheric conditions are updated weekly on the Climate Prediction Center web site (El Niño/La Niña Current Conditions and Expert Discussions). Forecasts for the evolution of El Niño/La Niña are updated monthly in the Forecast Forum section of CPC's Climate Diagnostics Bulletin. The next ENSO Diagnostics Discussion is scheduled for 7 August 2008. To receive an e-mail notification when the monthly ENSO Diagnostic Discussions are released, please send an e-mail message to: ncep.list.enso-update@noaa.gov.

Climate Prediction Center
National Centers for Environmental Prediction
NOAA/National Weather Service
Camp Springs, MD 20746-4304



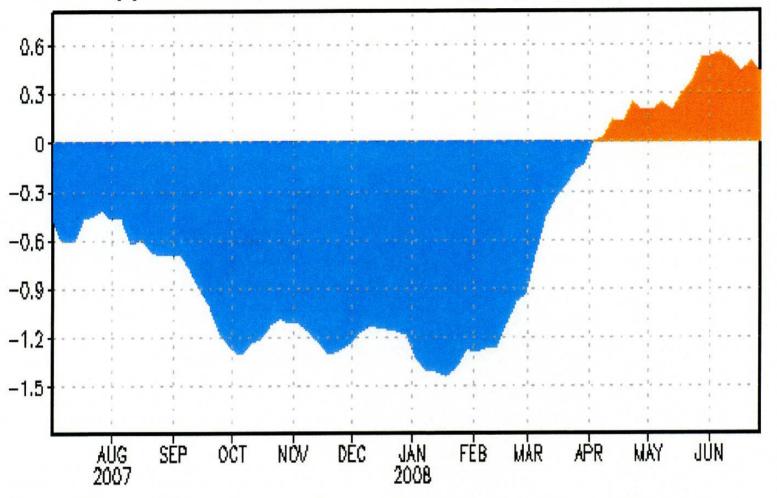
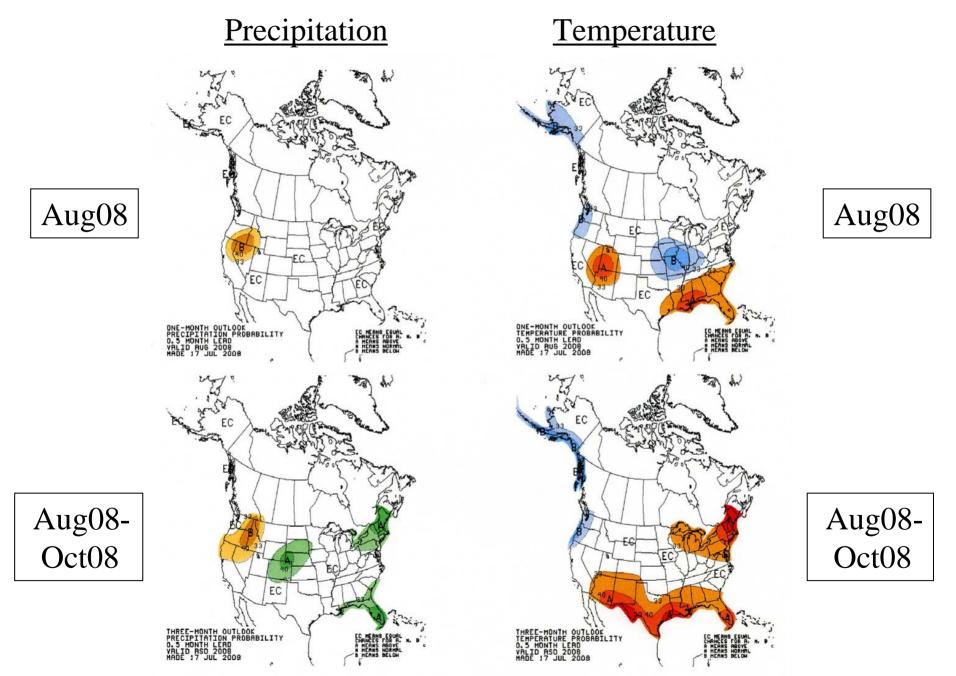
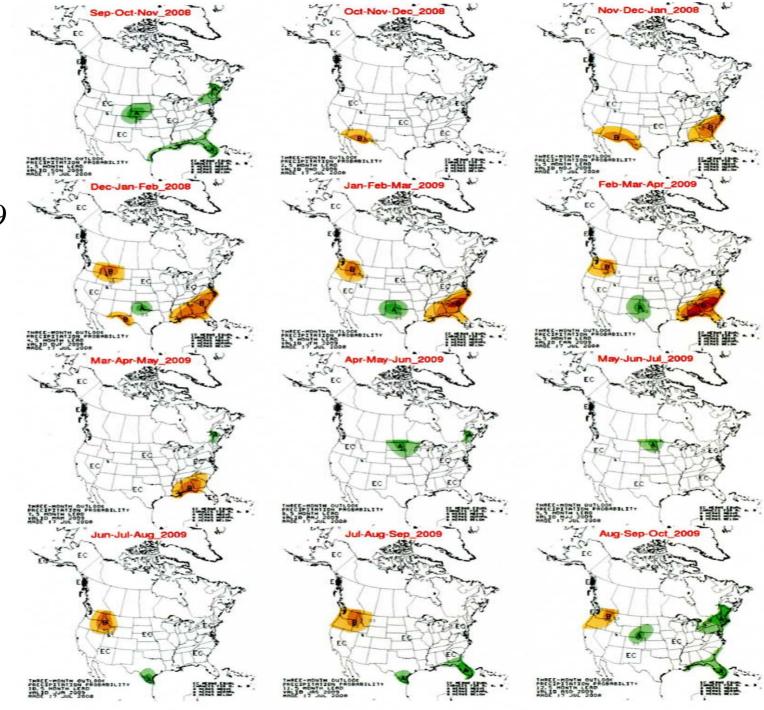


Figure 3. Area-averaged upper-ocean heat content anomalies (°C) in the equatorial Pacific (5°N-5°S, 180°-100°W). Heat content anomalies are computed as departures from the 1982-2004 base period weekly means.

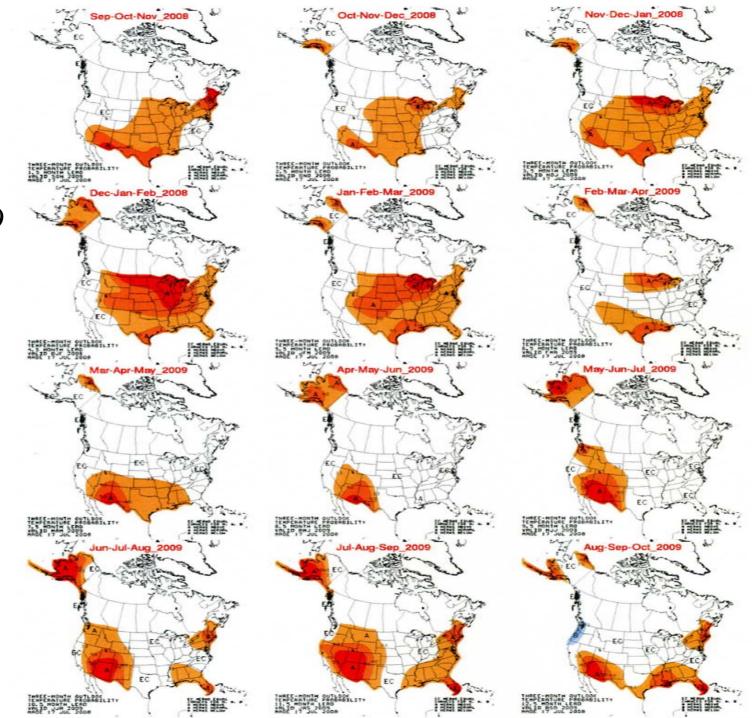
### 



Precipitation Sep08-Aug09



Temperature Sep08-Aug09



## RECLAMATION

Managing Water in the West

## RIO GRANDE PROJECT

## CURRENT RESERVOIR CONDITIONS



U. S Dept. of the Interior Bureau of Reclamation

#### **BUREAU OF RECLAMATION** RIO GRANDE PROJECT EL PASO, TX

#### **2008 OPERATIONAL DATA STATUS**

ELEPHANT BUTTE RESERVOIR			RESERVOIR WATER SURFACE ELEVATION (feet)	FEET BELOW SPILLWAY CREST (feet)	RESERVOIR TOTAL STORAGE (acre-feet)	PERCENT OF FULL RESERVOIR (%)	RESERVOIR WATER SURFACE AREA (acres)	PERCENT OF FULL RESERVOIR SURFACE AREA (%)
TODAY'S DATE:	Wednesday,	July 30, 2008	4348.80	58.20	626,128	31.73%	14,576	41.41%
2008 HIGH POINT:	Tuesday,	June 17, 2007	4350.18	56.82	646,410	32.76%	14,838	42.16%
2007 LOW POINT: Gates Closed Oct.		October 24, 2007	4324.40	82.60	323,488	16.19%	10,270	28.85%
2006 LOW POINT:	Friday,	July 28, 2006	4308.50	98.50	183,875	9.32%	7,228	20.54%
2005 LOW POINT:	Saturday,	January 01, 2005	4309.94	97.06	194,426	9.73%	7,426	20.86%
2004 LOW POINT:	Friday,	September 24, 2004	4294.04 *	112.96	94,615	4.79%	4,935	14.02%
* We haven't been th	his low at Eleph	ant Butte Reservoir since	November 1978.					

TODAY'S DATE:	Wednesday,	July 30, 2008	4149.62	22.82	**	65,342	28.83%	4,769	51.00%
2007 HIGH POINT:	Wednesday,	May 23, 2007	4151.88	20.56	**	76,662	33.82%	5,243	56.07%
2007 LOW POINT: Gates Closed Oct. 2	Tuesday, 6, 2007.	October 16, 2007	4132.72	39.72	**	13,287	5.86%	1,814	19.39%
2006 FALL LOW PT.: Gates Closed Oct. 10	Sunday, , 2006.	October 08, 2006	4141.98	30.46	**	35,351	15.60%	3,121	33.37%
2005 LOW POINT: Gates Closed Oct.	Thursday, 14, 2005.	October 13, 2005	4131.26	41.18	**	10,744	4.74%	1,670	17.86%
2004 GATES CLOSED:	Tuesday,	September 28, 2004	4134.10	38.34	**	15,883	7.01%	1,949	20.84%

# RECLAMATION Managing Water in the West

## RIO GRANDE PROJECT

## 2008 RESERVOIR OPERATIONS



U. S Dept. of the Interior Bureau of Reclamation

#### WORKSHEET OF STATUS OF RIO GRANDE COMPACT CREDIT WATERS & SAN JUAN-CHAMA WATER IN ELEPHANT BUTTE RESERVOIR AND ACCRUED DEPARTURES

WTreers 7/8/2008

**CREDITS** 

2008			# MARRIER CONTROL	
	ELE	PHANT BUTTE RESER	VOIR	CABALLO RESERVOIR
				Rio Grande
	Rio Grande	e Compact Naters	San Juan-	Compact Accrued Departure
	0.00.0		Chama	
	Colorado	New Mexico	Pool	Texas
	(AF)	(AF)	(AF)	(AF)
Beginning of 2008 (derived from 2007 RGC Accounting)	7,200	184,500	4,048	778,400
Inflow to San Juan-Chama Pool from transfer upstream (Mar. 1 - Mar. 24, 2008)			21,911	
Estimated Evaporation from Jan. 1 to Jun 30, 2008 (derived from actual data)			1,940	
Relinquishment of Credit Water by NM to TX on February 01, 2008		125,000		
Relinquishment of Credit Water by CO to TX on February 29, 2008	1,200			
Caballo Reservoir Releases (actual data thru Jun 30, 2008)				416,863
Bonita Lateral Releases (actual data thru July 07, 2008)				707
2008 Departure from Normal Release at Caballo Reservoir (thru Dec. 31, 2008)				0
Preliminary Status of RGC Credit Waters,			T. K. W.	
SJ-C Water, & Accr. Deps. to Jun 30, 2008	6,000	59,500	24,019	778,400
				Accrued Departure

## RIO GRANDE COMPACT <u>USABLE WATER</u> IN PROJECT STORAGE

Wednesday, July 30, 2008		
Elephant Butte Reservoir	626,128 acre-feet	
Caballo Reservoir	65,342 acre-feet	691,470 AF
Compact Credit Waters	-65,500 acre-feet	
San Juan-Chama Water	-24,019 acre-feet	-89,519 AF
<b>USABLE PROJECT WAT</b>	CER	601,951 AF

## RECLAMATION

# 2008 RIO GRANDE COMPACT <u>USABLE WATER</u> IN PROJECT STORAGE

#### **Rio Grande Compact Article VII Restriction**

Compact usable water went below 400K on Jul. 04, 2007 Compact usable water went above 400K on Feb. 01, 2008

Prediction (based on latest RGP op. plan dated 07/29/08):

Stay above 400K for the rest of 2008

PRELIMINARY SUBJECT TO REVIEW

29-Jul-08

BASED ON 2008 MARCH THROUGH JULY WATER SUPPLY OUTLOOK REPOR Jul 1

2005 MAR-JUL @ SAN MARCIAL (based on present conditions)

2008 MAR-JUL @ SAN MARCIAL (NRCS forecast)
2008 MAR-JUL @ SAN MARCIAL (regulated forecast)

116% 665 KAF 118% 676 KAF 113% 646 KAF

		COCHITI		SAN			HANT BUTT	E===>	<===	CABALLO	IRRIG.	EXCESS	TOTAL	* Actual his CABALLO	
	YEAR	RELEASE	LOSSES	MARCIAL	LOSSES	EVAP	CONTENT	RELEASE	<b>EVAP</b>	LOSSES	DEMAND	RELEASE	RELEASE	CONTENT	
_	2007														2007
	JAN	38	-14	52	5	2	558	1	1	-3	0	0	0	45	- Table 1
	FEB	40	-3	44	-1	4	598	0	1	-2	0	0	0	47	
	MAR	86	28	57	-14	7	609	54	1 2	4	76 74	0	76	19	
	APR	73	8	66	-15	10	556 601	124 73	3	6	56	0	74 56	61 68	100000000000000000000000000000000000000
	JUN	161 84	29 38	133 46	-11	10 14	571	73	4	-7	104	0	104	40	
	JUL	50	34	16	-13	11	461	128	3	1	105	0	105	59	
	AUG	44	29	15	-15	9	397	86	3	4	105	o	105	33	
	SEP	40	23	17	-12	7	358	61	1	0	77	0	77	16	10.00
	OCT	32	21	11	-5	6	326	42	1	-2	39	0	39	21	OCT
	NOV	32	5	27	-4	4	352	0	1	-2	0	0	0	22	NOV
	DEC	56	23	33	-27	3	409	0	1	-3	0	0	0	24	DEC
	TOTAL	736	221	515	-109	87		642	22	2	637	0	637		TOTAL
	AVG		Tota	l Mar-Jul			483							38	AVG
		454	137	317	55%					AND AND A PARK TOWN					
		COCHITI	NET	SAN	<====		HANT BUTT			CABALLO		EXCESS	TOTAL	CABALLO	
		RELEASE	LOSSES	MARCIAL	LOSSES	EVAP	CONTENT	RELEASE	EVAP	LOSSES	DEMAND	RELEASE	RELEASE	CONTENT	
	2008														2008
	JAN	45	-3	48	-1	3	455	1	1	-2	0	0	0	26	11.500.500.50
	FEB	58	4	54	-4	5	482	25	1	3	7	0	7	41	FEB
	MAR	135	52	83	-32	8	495	94	2	7	89	0	89	38	MAR
	APR	209	71	138	-32	12	536	117	3	6	95	0	95	51	APR
	MAY	260	84	176	-22	16	615	104	3	3	103	0	103	46	MAY
	A STATE OF THE PARTY OF THE PAR	238	83	155	-15	18	626	/ 141	8	-2	124	0		56	STATE OF THE PARTY
	JUN		10000	.555550	5.50					1,777		0.007	124		JUN
	JUL	80	-13	93	6	20	625	68	3	-20	80	0	80	61	JUL
	AUG	84	36	48	-9	18	547	117	3	3	132	0	132	40	AUG
	SEP	50	15	35	-6	12	515	62	1	0	80	0	80	20	SEP
	OCT	47	17	30	-4	10	509	29	1	-2	39	0	39	11	OCT
	NOV	52	-7	59	1	5	562	0	1	-2	0	0	0	12	NOV
	DEC	53	-7	60	2	3	617	0	1	-3	0	0	0	14	DEC
							017			The second second				14	
	OTAL	1311	331	980	-117	130		759	28	-8	749	0	749	7	TOTAL
	AVG			I Mar-Jul			549							35	AVG
		923 COCHITI	276	646 CAN	113%	FLEDI	IANT DUTT		-	CABALLO	IDDIO	EVOCO	TOTAL	0484110	
	VEAD	RELEASE	NET	SAN			CONTENT			CABALLO		EXCESS	TOTAL	CABALLO	
_	2009	KELEASE	LUSSES	WARCIAL	LUSSES	EVAP	CONTENT	RELEASE	EVAP	LUSSES	DEMAND	RELEASE	RELEASE	CONTENT	2009
	JAN	40	-7	47	0	4	660	0	1	-3	0	0	0	16	JAN
	FEB														1.750
		44	-4	48	-0	8	677	23	1	-2	0	0	0	40	FEB
	MAR	75	15	60	-1	10	600	128	2	2	119	0	119	45	MAR
	APR	157	37	120	-2	16	623	83	2	2	79	0	79	45	APR
	MAY	250	55	195	-4	18	704	100	3	2	90	0	90	50	MAY
	JUN	197	67	130	-6	24	679	137	4	2	131	0	131	50	JUN
	JUL	119	51	68	-7	18	600	136	4	-1	133	0	133	50	JUL
	AUG	78	34	44	-9		531								
	510,000					14		108	2	-3	124	0	124	35	AUG
	SEP	55	23	32	-6	12	495	62	1	-2	78	0	78	20	SEP
	OCT	47	17	30	-2	10	492	25	1	-2	35	0	35	11	OCT
	NOV	52	-7	59	2	5	544	0	1	-2	0	0	0	12	NOV
	DEC	53	-7	60	2	3	598	0	0	-3	0	0	0	14	DEC
		1167	274	894	-33	142		803	22	-9	790	0	790		TOTAL
7	OTAL									-					· OIAL
	AVG	1101		tal Mar-Jul			600							32	AVG

## RECLAMATION

Managing Water in the West

## RIO GRANDE PROJECT

# 2008 WATER SUPPLY & PROJECTED ALLOCATION



U. S Dept. of the Interior Bureau of Reclamation

## RECLAMATION

Managing Water in the West

## RIO GRANDE PROJECT

## 2008 PRECIPITATION

```
Elephant Butte Dam -0.27 in. (normal -1.96 in.) [thru Jun 30]
```

```
Caballo Dam -0.98 in. (normal -1.84 in.) [thru Jun 30]
```

```
Las Cruces, NM – 3.97 in. (normal – 3.55 in.) [thru Jul 28] (0.21 in.)
```

```
El Paso, TX – 5.16 in. (normal – 3.66 in.) [thru Jul 28] (0.34 in.)
```

#### 2008 Rio Grande Project Allocation

#### Initial Allocation - End of December, 2007

(letter issued Jan. 18, 2008)

Elephant Butte Irrigation District  El Paso County Water Improvement District # 1	59,928 AF 154.901 AF
[24.20% of a full supply]	225,540 AF

#### Updated Allocation - End of January, 2008

(letter issued Feb. 21, 2008)

Mexico	26,935 AF
Elephant Butte Irrigation District	151,859 AF
El Paso County Water Improvement District # 1	232,339 AF
[44.12% of a full supply]	411,133 AF

#### Updated Allocation - End of February, 2008

(letter issued Mar. 20, 2008)

[49.37% of a full supply]	460,030 AF *
El Paso County Water Improvement District # 1	258,634 AF
Elephant Butte Irrigation District	169,877 AF
Mexico	31,519 AF

#### Updated Allocation - End of March, 2008

(letter issued Apr. 17, 2008)

Mexico	38,773 AF
Elephant Butte Irrigation District	198,384 AF
El Paso County Water Improvement District # 1	300,239 AF
[57.67% of a full supply]	537,396 AF *

#### Updated Allocation - End of April, 2008

(letter issued May 19, 2008)

Mexico	52,680 AF
Elephant Butte Irrigation District	253,045 AF
El Paso County Water Improvement District # 1	380,012 AF
[73.59% of a full supply]	685,737 AF *

\* Project water supply available for diversion at the authorized canal headings.

### 2008 Rio Grande Project Allocation

#### Updated Allocation - End of May, 2008

(letter issued June 17, 2008)

(101101 100101 01110 111, 10010)			
Mexico	59,411	AF	
Elephant Butte Irrigation District	329,098	AF	
El Paso County Water Improvement District # 1	480,490	AF	
[93.26% of a full supply]	868,999	AF	*

#### **Updated Allocation - End of June, 2008**

(letter issued July 09, 2008)

Mexico	59,485 AF
Elephant Butte Irrigation District	320,838 AF
El Paso County Water Improvement District # 1	500,859 AF
	-
[94.56% of a full supply]	881,182 AF

<sup>\*</sup> Project water supply available for diversion at the authorized canal headings.

\*

### 2008 Rio Grande Project Allocation

#### Updated Allocation - End of June, 2008

(letter issued July 09, 2008)

Mexico	59,485 AF
Elephant Butte Irrigation District	320,838 AF
El Paso County Water Improvement District # 1	500,859 AF

[94.56% of a full supply]

881,182 AF \*

### 2007 Rio Grande Project Allocation

#### Updated Allocation - End of June, 2007

(letter issued July 16, 2007)

Mexico	56,116 AF
Elephant Butte Irrigation District	264,153 AF
El Paso County Water Improvement District # 1	374,889 AF
[74.60% of a full supply]	695,158 AF *

<sup>\*</sup> Project water supply available for diversion at the authorized canal headings.

<sup>\*</sup> Project water supply available for diversion at the authorized canal headings.

## 

	Caballo Release AF	Heading Diversions AF	Charges AF	Efficiency %
Jan Feb Mar Apr May Jun Jul Aug Sep Oct	0 6611 88602 94705 102678	0 3259 76175 92542 91886	3408 73271 93749 100589	52% 83% 99% 98%
Total	292596	263862	271017	93%

## CABALLO RESERVOIR RELEASE TENTATIVE SCHEDULE FOR 2008

\* actual release dates.

* Feb. 20: Release from Caballo Dam for EP#1's orde	* Feb. 20:	Dam for EP#1's orders
---	------------	-----------------------

- \* Feb. 21: Release from Elephant Butte Dam
- \* Feb. 29: Release from Caballo Dam for EBID's orders
- \* March 14: Release from Caballo Dam for Mexico's orders
- \* July 26: Release from Caballo Dam shut down due to heavy rains
- \* July 29: Release from Caballo Dam for EBID & EP#1 orders
  - Oct. 14: Tentative shutdown of EButte Dam for end of season
  - Oct. 15: Tentative shutdown at Caballo Dam to end irrig. season

## RECLAMATION

Managing Water in the West

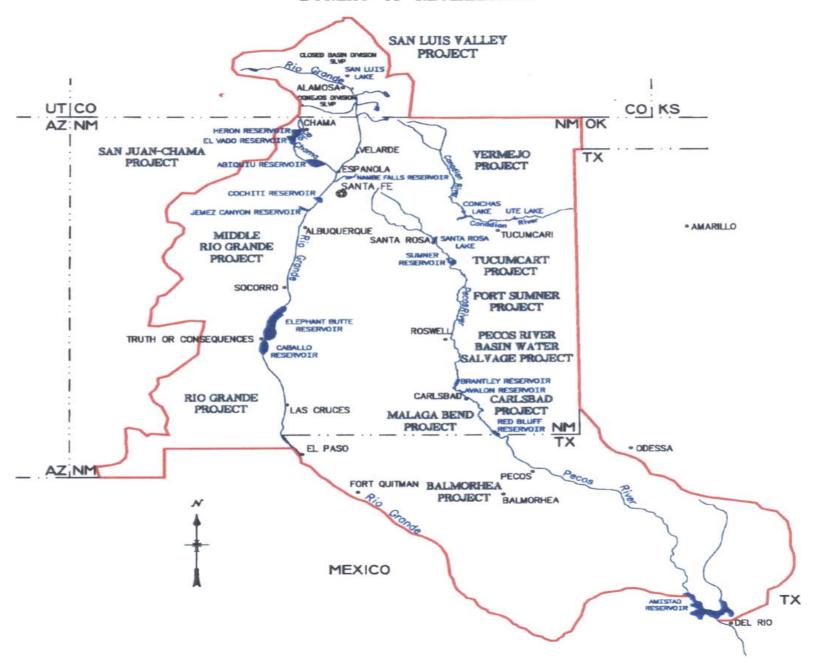
## RIO GRANDE PROJECT

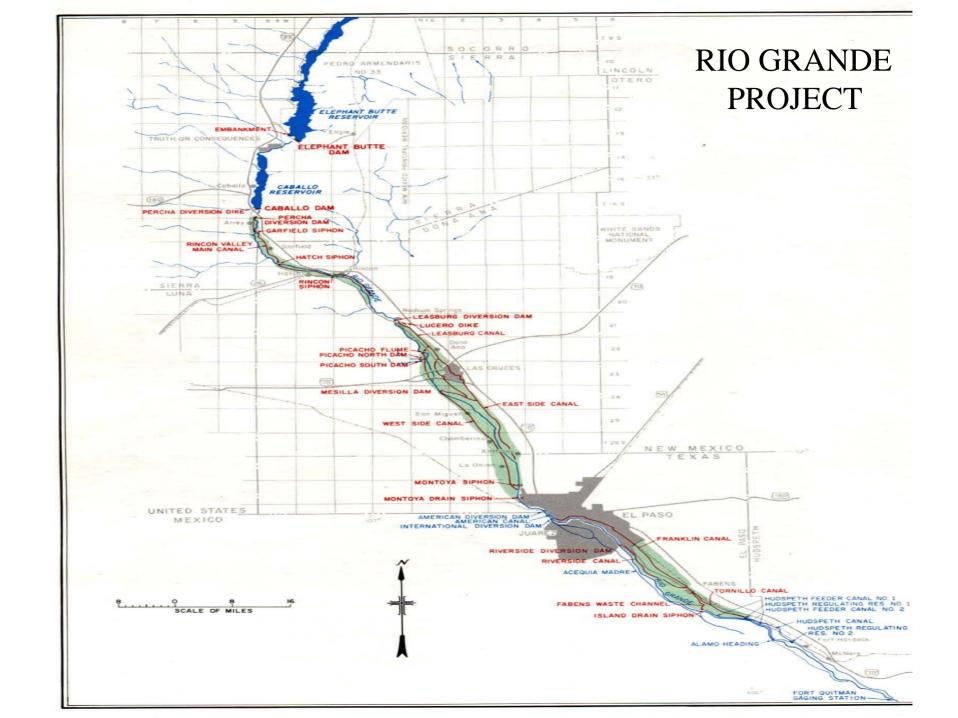
## SUPPORTING INFORMATION



U. S Dept. of the Interior Bureau of Reclamation

### ALBUQUERQUE AREA OFFICE BUREAU OF RECLAMATION





## RIO GRANDE PROJECT 2007 WATER OPERATIONS SUMMARY

ELEPHANT BUTTE RESERVOIR INFLOW	515,050	A-F
ELEPHANT BUTTE RESERVOIR OUTFLOW	642,060	A-F
CABALLO RESERVOIR INFLOW	642,060	A-F
CABALLO RESERVOIR OUTFLOW	636,860	A-F
EBID WATER CHARGES	302,665	A-F
EPCWID#1 WATER CHARGES *	278,252	A-F
CITY OF EL PASO DIVERSIONS	58,792	A-F
HCCRD DIVERSIONS **	82,262	A-F
FT. QUITMAN FLOW ***	63,263	A-F

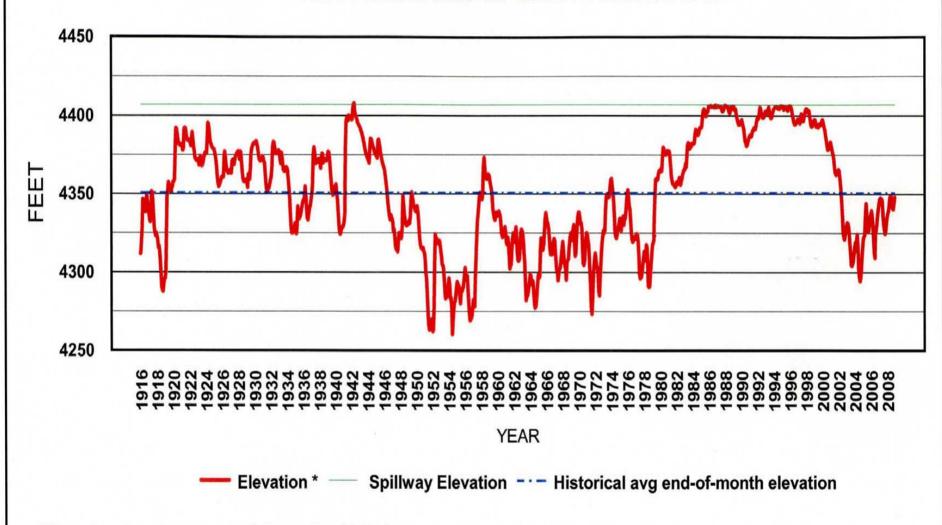
<sup>\*</sup> Includes City of El Paso diversions.

<sup>\*\*</sup> System waste and return flows.

<sup>\*\*\*</sup> Includes discharge from Acequia Madre in Mexico.

### **ELEPHANT BUTTE RESERVOIR**

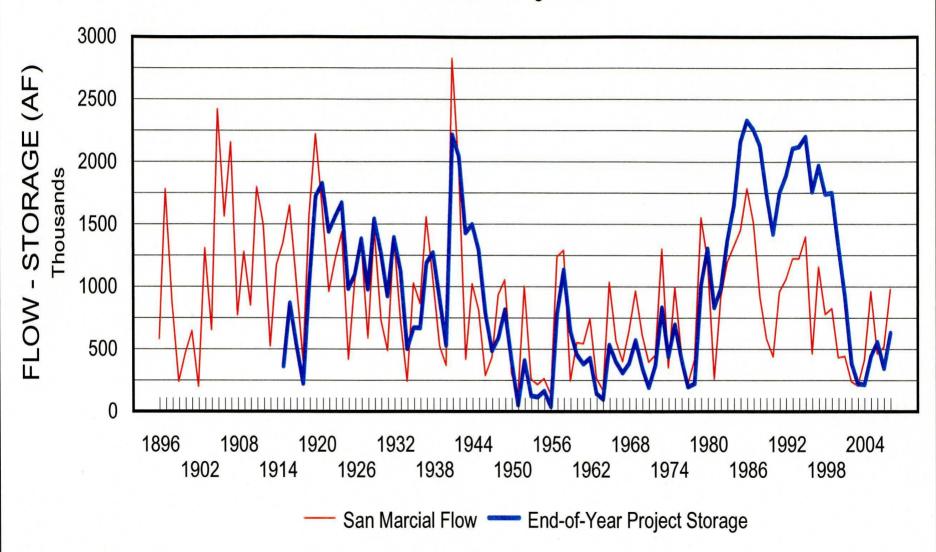
HISTORICAL END-OF-MONTH ELEVATION\*\*



<sup>\*\*</sup>Data thru June 2008 is actual data; other 2008 data is a projection based on Reclamation's most probable plan.

<sup>\*</sup> BOR project datum. To obtain mean sea level datum, add 43.3 feet

## SAN MARCIAL FLOW - RIO GRANDE PROJECT STORAGE 1896 Through 2008\*



<sup>\*</sup> End-of-year project storage and San Marcial flow for 2008 is a projection based on Rio Grande Project most probable plan.

#### STATUS OF RIO GRANDE COMPACT CREDIT WATERS IN ELEPHANT BUTTE RESERVOIR SINCE LAST SPILL FROM RIO GRANDE PROJECT STORAGE \*

YEAR	COLORADO (acre-feet)	NEW MEXICO (acre-feet)	
1995	0	О	SPILL YEAR
1996	2,400	68,800	
1997	2,900	105,500	
1998	11,500	153,100	
1999	17,700	170,700	
2000	27,000	269,100	
2001	10,100	155,700	
2002	42,800	265,000	
2003	1,200	54,000	
2004	4,400	35,600	
2005	4,600	37,100	
2006	15,500	180,100	
2007	7,200	184,500	

<sup>\*</sup> derived from Rio Grande Compact Commission yearly reports.

# 2007 RIO GRANDE COMPACT <u>USABLE WATER</u> IN PROJECT STORAGE

#### **Rio Grande Compact Article VII Restriction**

Compact usable water went above 400K on Nov. 06, 2006 Compact usable water went below 400K on Jan. 01, 2007 Compact usable water went above 400K on Jan. 29, 2007 Compact usable water went below 400K on Jul. 04, 2007

## 2002 - 2006 RIO GRANDE COMPACT <u>USABLE WATER</u> IN PROJECT STORAGE

#### **Rio Grande Compact Article VII Restriction**

Compact Usable Water Below 400,000 AF – July 4, 2002

Compact Usable Water Above 400,000 AF – May 20, 2005

Compact Usable Water Below 400,000 AF – August 26, 2005

Compact Usable Water Above 400,000 AF – December 27, 2005

Compact Usable Water Below 400,000 AF – April 14, 2006

Compact Usable Water Above 400,000 AF – November 06, 2006

Compact Usable Water Below 400,000 AF – January 01, 2007

## RECLAMATION

Rio Grande Project Diversion Ratio (Net Diversion Allocation Charges to Release from Storage)

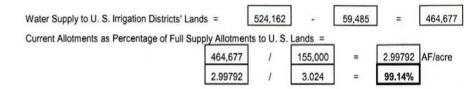
		3			1	
						Diversion
Year	Release	EBID	EPCWID	Mexico	Total	Ratio
2001	783,822	437,088	299,246	61,038	797,372	1.017287
2002	801,147	403,962	364,847	60,325	829,134	1.034934
2003	364,528	152,731	126,639	26,948	306,318	0.840314
2004	399,519	159,278	131,321	27,614	318,213	0.796490
2005	676,031	344,687	237,684	58,091	640,462	0.947386
2006	432,770	200,227	169,574	28,532	398,333	0.955300
2007	636,136	302,664	278,251	51,779	632,694	0.994589

1	Rio Grande Project Diversion Allocations (June 30, 2008)	ac-ft
2	Elephant Butte Reservoir Storage	625,545
3	Caballo Reservoir Storage	56,338
4	Total Rio Grande Project Storage	681,883
5	Estimated Rio Grande Compact Credit Waters	(65,500)
6	Estimated San Juan-Chama Water	(24,019)
7	Water Released from Storage	416,863
8	Total Usable Water Available for Release	1,009,227
9	Carryover Obligation using Estimated Diversion Ratio	109,165
10	Total Usable Water Available for Current Year Allocation	790,000
11	EBID Allocation Balance (Previous Year)	
12	EPCWID Allocation Balance (Previous Year)	106,982
13	EBID Estimated Allocation Balance (End-of-Year)	
14	EPCWID Estimated Allocation Balance (End-of-Year)	138,000
15	Storage for EBID and EPCWID Estimated Allocation Balance (End-of-Year)	140,816
188	Estimated Release of Current Usable Water	758,349
17	Estimated End-of-Year Release for Diversion Ratio	756,176
18	D1 Delivery	524,162
500	Mexico's Current Diversion Allocation	59,485
	Gross D2 Diversion Allocation	958,055
21	EPCWID ACE Conservation Credit	5,463
22	Net D2 Diversion Allocation for EBID and EPCWID	898,570
0.05	D2 Diversion Allocation for EPCWID	388,414
24	EPCWID Diversion Allocation (w/o Conservation Credit)	495,396
	EPCWID Diversion (w/o Conservation Credit or 67/155ths of Row 30)	357,396
26	Diversion Ratio	0.980000
27	Diversion Ratio Adjustment	(15,167)
	Sum of Release and Diversion Ratio Adjustment	743,182
3,7272	EBID D2 Diversion Allocation	510,156
1,035	Difference between EBID Diversion Ratio Allocation and D2 Diversion Allocation	-
	EBID Diversion Ratio Allocation	320,838
	EBID Diversion Allocation	320,838
1500	Total EBID Diversion Allocation (includes 88/155th of Value in Row 30)	320,838
357	Total EPCWID Allocation (includes Row 21 and 67/155th of Value in Row 30)	500,859
	Total EBID, EPCWID, and Mexico Allocation	881,182

W Treers 7/8/2008

#### Status Check of 1906 Treaty Obligation to Deliver Proportionately the Same Amount of Water Supply to the U. S. Lands & Mexico's Canal Heading

#### U. S. Districts Proportional Delivery to Lands



#### Mexico's Proportional Diversion at Its Canal Heading

Mexico's Acequia Madre Heading Allotment = 59,485

Current Allotment as Percentage of Full Supply Allotment to Canal Heading = 59,485 / 60,000 = 99.14%

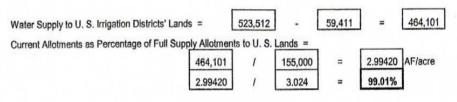
1 Rio Grande Project Diversion Allocations (May 31, 2008 EPCWID)	ac-ft
2 Elephant Butte Reservoir Storage	614,523
3 Caballo Reservoir Storage	46,075
4 Total Rio Grande Project Storage	660,598
5 Estimated Rio Grande Compact Credit Waters	(65,500)
6 Estimated San Juan-Chama Water	(24,340)
7 Water Released from Storage	292,404
8 Total Usable Water Available for Release	863,162
9 Carryover Obligation using Estimated Diversion Ratio	105,600
10 Total Usable Water Available for Current Year Allocation	757,562
11 EBID Allocation Balance (Previous Year)	-
12 EPCWID Allocation Balance (Previous Year)	106,982
13 EBID Estimated Allocation Balance (End-of-Year)	
14 EPCWID Estimated Allocation Balance (End-of-Year)	106,982
15 Storage for EBID and EPCWID Estimated Allocation Balance (End-of-Year)	105,600
16 Estimated Release of Current Usable Water	757,562
17 Estimated End-of-Year Release for Diversion Ratio	756,176
18 D1 Delivery	523,512
19 Mexico's Current Diversion Allocation	59,411
20 Gross D2 Diversion Allocation	923,497
21 EPCWID ACE Conservation Credit	5,463
22 Net D2 Diversion Allocation for EBID and EPCWID	864,085
23 D2 Diversion Allocation for EPCWID	373,508
24 EPCWID Diversion Allocation (w/o Conservation Credit)	480,490
25 EPCWID Diversion (w/o Conservation Credit or 67/155ths of Row 30)	373,508
26 Diversion Ratio	1.013091
27 Diversion Ratio Adjustment	9,918
28 Sum of Release and Diversion Ratio Adjustment	767,480
29 EBID D2 Diversion Allocation	490,577
30 Difference between EBID Diversion Ratio Allocation and D2 Diversion Allocation	400,011
31 EBID Diversion Ratio Allocation	329,098
32 EBID Diversion Allocation	329,098
33 Total EBID Diversion Allocation (includes 88/155th of Value in Row 30)	329,098
34 Total EPCWID Allocation (includes Row 21 and 67/155th of Value in Row 30) 35 Total EBID, EPCWID, and Mexico Allocation	480,490 868,999

Status Check of 1906 Treaty Obligation to Deliver Proportionately the Same

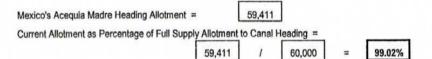
Amount of Water Supply to the U. S. Lands & Mexico's Canal Heading

W Treers

#### U. S. Districts Proportional Delivery to Lands



#### Mexico's Proportional Diversion at its Canal Heading



#### ELEPHANT BUTTE RESERVOIR

TOTAL STORAGE

FLOOD RESERVATION POOL

100,000 AF

2.023.358 AF

Top of Conservation Storage Pool: (Rio Grande Project Authorization) (ELEV 4407.00 FT)

25,000 AF (WINTER) Top of Conservation Storage Pool: 1,998,358 AF

Winter (October 1 - March 31) (ELEV 4406.30 FT)

50,000 AF (SUMMER) Top of Conservation Storage Pool: 1,973,358 AF

Summer (April 1 - September 30) (ELEV 4405.60 FT)

Top of City of Albuquerque SJ-C Pool: 50,000 AF 1983 Contract for irrig, and domestic (ELEV 4295.11 FT)

Top of Federal Recreation Pool: 50,000 AF

1974 Public Law 93-493, 88 Stat. 1486 (ELEV 4282.68 FT)

#### CABALLO RESERVOIR

EXCLUSIVE FLOOD CONTROL

Top of Flood Control Pool: 326.672 AF

(ELEV 4182.00 FT)

Top of Conservation Storage Pool: 226.672 AF

(ELEV 4172.44 FT)

Top of Minimum Fishery Pool: 25,000 AF Biological Opinion (1991) (ELEV 4138.24 FT)

#### Court Order No. CIV-90-95 HB/WWD:

October 1 - January 31 (each year), storage level will not exceed 50,000 AF (elev 4146.11 ft)

#### Operation Plan of Caballo Reservoir during 2008:

February 1 - September 30 (2008), storage level will be maintained such that the storage level shall not exceed 57,000 AF (elev 4147.79 ft) nor drop below 10,000 AF (elev 4130.81 ft) from Feb. 1 to Sep. 30

#### RIO GRANDE PROJECT HISTORICAL ALLOCATION OF PROJECT WATER SUPPLY

WTreers 03/05/2008

	EO FEB. TOTAL RIO	SAN MARCIAL	INITIAL	FINAL	INITIAL ALLOTMENT	FINAL ALLOTMENT	EO OCT. TOTAL RIO	MEXICO DIVERSION	INITIAL RELEASE	CABALLO DAM
	GRANDE	SPRING	ALLOTMENT	ALLOTMENT	TO PROJECT	TO PROJECT	GRANDE	AT ACEQUIA	DATE	TOTAL
	PROJECT	RUNOFF	TO PROJECT	TO PROJECT	CANAL	CANAL	PROJECT	MADRE	FROM	YEARLY
	STORAGE	(Mar-Jul)	LANDS	LANDS	HEADINGS	HEADINGS	STORAGE	HEADING	CABALLO	RELEASE
YEAR	(acre-feet)	(acre-feet)	(acre-foot/acre)	(acre-foot/acre)	(acre-feet)	(acre-feet)	(acre-feet)	(acre-feet)	DAM	(acre-feet)
1951	452,730	17,877	1.00	1.75			32,900	33,059	03/06	469,450
1952	103,920	832,160	0.21	2.50			370,950	49,890	03/20	543,975
1953	468,600	143,170	1.00	1.90			99,990	37,760	03/10	528,628
1954	184,460	76,720	0.42	0.50			91,480	10,147	03/20	244,165
1955	169,850	68,920	0.21	0.42			129,700	8,185	03/20	219,157
1956	212,180	59,885	0.33	0.39			31,040	7,864	03/18	246,140
1957	77,130	600,680	0.10	1.17			645,760	23,290	03/20	397,103
1958	857,510	988,030	1.75	4.00			1,007,170	60,050	03/01	737,125
1959	1,185,120	72,590	3.00	3.50			575,670	60,110	03/02	687,414
1960	713,550	410,900	2.25	3.25			405,820	60,320	03/02	705,162
1961	492,870	269,550	1.25	2.45			223,080	48,610	03/10	561,697
1962	486,570	448,250	1.75	3.25			269,580	60,057	03/05	651,941
1963	513,170	116,765	1.85	2.00			109,440	39,693	03/05	517,172
1964	194,790	67,930	0.25	0.33			58,670	6,653	03/15	206,085 505,598
1965	172,340	598,290	0.17	1.85		1	340,940	36,658 49,618	03/20	610,341
1966	627,430	328,380	1.75	2.50			312,910 223,340	29,829	02/27	456,517
1967	454,710	74,090	1.25	1.50		-		39,677	02/27	505,691
1968	386,860	238,560	1.00	2.00		_	277,530 387,410	59,884	02/27	667,669
1969	466,970	358,710	1.25	3.00		_	223.870	60,065	02/23	661,125
1970	614,620	257,960	2.00	3.00		_	75,540	34,847	02/26	498,375
1971	435,640	112,837	1.50	1.75		-	258,910	16,077	03/01	260,911
1972	283,380	77,630	0.60	0.80 3.00		_	707,340	60,000	03/09	617,461
1973	457,960	914,090	1.00 3.00	3.00			376,650	60,050	03/02	640,843
1974	915,650	95,430 617,850	1.00	3.00		+	534,490	60,052	01/24	580,617
1975	507,700 762,230	204,260	2.50	3.00			353,910	60,172	01/16	679,676
1976			1.00	1.25		_	140,460	24,824	03/03	416,496
1977	482,460 268,220	43,374 248,610	0.25	0.75			112,160	14,903	03/10	356,167
1978 1979	328,690	1,148,880	0.67	3.00		790,000	855,640	60,055	03/08	568,687
1980	1,080,400	861,894	3.00	3.00		790,000	1,178,400	60,033	01/17	658,686
1981	1,339,860	54,256	3.00	3.00	750,650	750,650	774,380	60,262	02/04	608,166
1982	878,660	548,573	3.00	3.00	790,000	790,000	866,140	59,257	01/27	635,642
1983	1,070,130	920,545	3.00	3.00	790,000	790,000	1,289,750	60,621	02/03	648,386
1984	1,424,200	831,291	3.00	3.00	902,000	902,000	1,515,500	58,588	02/09	653,150
1985	1,747,700	1,133,599			902,000	902,000	2,121,600	60,276	02/20	677,398
1986	2,322,200	812,686			902,000	902,000	2,290,800	66,163	04/01	1,396,165
1987	2,336,900	1,003,319			902,000	902,000	2,168,400	65,866	02/03	1,376,099
1988	2,383,900	419,098			902,000	902,000	2,060,100	61,935	01/20	838,008
1989	2,151,900	378,144			890,900	890,900	1,705,300	58,854	02/13	736,866
1990	1,801,000	159,213			931,841	931,841	1,319,400	58,353	02/12	680,107
1991	1,509,660	656,638			931,841	931,841	1,580,080	59,242	02/19	625,956
1992	1,830,380	745,950			931,841	931,841	1,802,720	58,080	01/09	734,982
1993	1,980,230	742,508			931,841	931,841	1,978,640	63,763	01/12	823,263
1994	2,155,690	852,845			931,841	931,841	2,003,860	60,167	01/11	893,384
1995	2,203,730	991,736			931,841	931,841	2,083,050	63,618	01/17	1,096,146
1996	2,263,420	131,980			931,841	931,841	1,689,550	60,063	01/12	774,335
1997	1,814,910	600,666			931,841	931,841	1,814,980	59,442	01/21	798,621
1998	2,036,000	447,172			931,841	931,841	1,636,860	60,628	01/16	808,661
1999	1,803,410	384,225			931,841	931,841	1,658,810	58,308	01/27	735,467
2000	1,804,980	159,000			931,841	931,841	1,243,900	60,611	01/20	751,373
2001	1,359,370	241,000			931,841	931,841	856,910	61,037	02/02	786,549
2002	974,610	61,095			738,139	931,841	323,190	60,324	02/19	801,147
2003	456,140	62,029			74,860	317,495	170,490	26,948	03/17	364,528
2004	288,480	240,387			43,667	353,944	128,010	27,613	03/12	398,612
2005	331,000	738,095			138,549	931,841	362,060	58,091	03/09	676,031
2006	517,170	92,521			351,560	472,426	436,950	27,112	03/08	434,228
2007	644,990	316,979			369,466	760,391	346,170	51,245	03/07	636,730